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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,724	09/15/2003	Sachin Garg	630-044US	1503

47912 7590 07/11/2008

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ART UNIT	PAPER NUMBER
2143	

NOTIFICATION DATE	DELIVERY MODE
07/11/2008	ELECTRONIC

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/662,724
Filing Date: September 15, 2003
Appellant(s): GARG ET AL.

Jason Paul DeMont
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/28/08 appealing from the Office action mailed 10/3/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

U.S. patent application Serial No. 10/662,728, filed 09/15/2003 (Attorney docket 630-045us) is related to this application. An appeal in that case is currently pending and awaiting review.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Lyon et al US Pat 6,333,917

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims **1-12** are rejected under 35 U.S.C. 102(b) as being unpatentable over Lyon et al (US Pat 6,333,917).

Consider **Claim 1**, Lyon et al clearly discloses the method of receiving a first plurality of protocol data units at a first input (Lyons et al Col 3, Lines 59-62) of a protocol-data-unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18), wherein all of the protocol data units received at said first input (Lyons et al Col 3, Lines 59-62) are en route to a first congestible node (Lyons et al, Col 6, Lines 7-19); receiving at a said protocol-data-unit excisor (Lyons et al, Col 3 Line 58) a metric of a queue (Lyons et al, Col 14, Lines 55-65) in a said first congestible node (Lyons et al, Col 6, Lines 7-19); and selectively dropping (Lyons et al, Col 6, Lines 25-30), at said protocol-data-unit excisor (Lyons et al, Col 3 Line 58), one or more of said first plurality of protocol data units based on said metric of said queue (Lyons et al, Col 14, Lines 55-65) in said first congestible node (Lyons et al, Col 6, Lines 7-19). Lyon et al clearly shows on how packets are transmitted over the network from multiple number of sources while on route to the node(s), during the transmission the packets go through the switch before reaching the node(s), and within the switch, it

calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 2**, Lyon et al clearly discloses the method of claim 1 wherein said protocol data unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18) decides whether to drop a protocol data unit (Lyons et al, Col 6, Lines 25-30) based on Random Early Detection (Lyons et al, Col 1, Line 10, Col 6, Lines 50-60). Lyon et al clearly shows on the use of Random Early Detection in its switch for controlling congestion of packets passing through the network.

Consider **Claim 3**, Lyon et al clearly discloses the method of claim 1 wherein receiving a second plurality of protocol data units at a second input (Lyons et al Col 3, Lines 59-62) of said protocol data unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18), wherein all of the protocol data units received at said second input (Lyons et al Col 3, Lines 59-62) are en route to a second congestible node (Lyons et al, Col 6, Lines 7-19); receiving at said protocol data unit excisor (Lyons et al, Col 3 Line 58) a metric of a queue (Lyons et al, Col 14, Lines 55-65) in a said second congestible node (Lyons et al, Col 6, Lines 7-19); and selectively dropping (Lyons et al, Col 6, Lines 25-30), at said protocol data unit excisor (Lyons et al, Col 3 Line 58), one or more of said second plurality of protocol data units based on said metric of said queue (Lyons et al, Col 14, Lines 55-65) in said second

congestible node (Lyons et al, Col 6, Lines 7-19). Lyon et al clearly shows on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 4**, Lyon et al clearly discloses protocol data unit excisor (Lyons et al, Col 3 Line 58) comprising: a first input (Lyons et al Col 3, Lines 59-62) for receiving a first plurality of protocol data units, wherein all of the protocol data units received at said first input (Lyons et al Col 3, Lines 59-62) are en route to a first congestible node (Lyons et al, Col 6, Lines 7-19) a second input (Lyons et al Col 3, Lines 59-62) for receiving a metric of a queue (Lyons et al, Col 14, Lines 55-65) in a said first congestible node (Lyons et al, Col 6, Lines 7-19); and a processor for selectively dropping (Lyons et al, Col 6, Lines 25-30), one or more of said first plurality of protocol data units based on said metric of said queue (Lyons et al, Col 14, Lines 55-65) in said first congestible node (Lyons et al, Col 6, Lines 7-19). Lyon et al clearly shows on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 5**, Lyon et al clearly discloses the protocol data unit excisor (Lyons et al, Col 3 Line 58) of claim 4 wherein said protocol-data-unit excisor (Lyons et al, Col 3 Line 58) decides whether to drop a protocol data unit (Lyons et al, Col 6, Lines 25-30) based on Random Early Detection (Lyons et al, Col 1, Line 10, Col 6, Lines 50-60). Lyon et al clearly shows on the use of Random Early Detection in its switch for controlling congestion of packets passing through the network.

Consider **Claim 6**, Lyon et al clearly discloses the protocol-data-unit excisor (Lyons et al, Col 3 Line 58) of claim 4 further comprising: a third input (Lyons et al Col 3, Lines 59-62) for receiving a second plurality of protocol data units, wherein all of the protocol data units received at said third input (Lyons et al Col 3, Lines 59-62) are en route to a second congestible node (Lyons et al, Col 6, Lines 7-19); a fourth input receiver (Lyons et al Col 3, Lines 59-62) for receiving a metric of a queue (Lyons et al, Col 14, Lines 55-65) in a said second congestible node (Lyons et al, Col 6, Lines 7-19); and a wherein said processor is also for selectively dropping (Lyons et al, Col 6, Lines 25-30), one or more of said second plurality of protocol data units based on said metric of said queue (Lyons et al, Col 14, Lines 55-65) in said second congestible node (Lyons et al, Col 6, Lines 7-19). Lyon et al clearly shows on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 7**, Lyon et al clearly discloses the method of receiving a first plurality of protocol data units at a first input (Lyons et al Col 3, Lines 59-62) of a protocol-data-unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18), wherein all of the protocol data units received at said first input (Lyons et al Col 3, Lines 59-62) are en route to a first congestible node (Lyons et al, Col 6, Lines 7-19); estimating in said protocol-data-unit excisor (Lyons et al, Col 3 Line 58) a first metric of a first queue (Lyons et al, Col 14, Lines 55-65) of protocol data units in said first congestible node (Lyons et al, Col 6, Lines 7-19) based on said first plurality of protocol data units; and selectively dropping (Lyons et al, Col 6, Lines 25-30), at said protocol-data-unit excisor (Lyons et al, Col 3 Line 58), one or more of said first plurality of protocol data units en route to said first congestible node (Lyons et al, Col 6, Lines 7-19) based on said first metric (Lyons et al, Col 14, Lines 55-65). Lyon et al clearly shows the method on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 8,** Lyon et al clearly discloses the method of claim 7 wherein said protocol-data-unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18) decides whether to drop a protocol data

unit (Lyons et al, Col 6, Lines 25-30) based on Random Early Detection (Lyons et al, Col 1, Line 10, Col 6, Lines 50-60). Lyon et al clearly shows on the use of Random Early Detection in its switch for controlling congestion of packets passing through the network.

Consider **Claim 9**, Lyon et al clearly discloses the method of claim 7 further comprising receiving a second plurality of protocol data units at a second input (Lyons et al Col 3, Lines 59-62) of said protocol data unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18), wherein all of the protocol data units received at said second input (Lyons et al Col 3, Lines 59-62) are en route to a second congestible node (Lyons et al, Col 6, Lines 7-19); estimating in said protocol data unit excisor (Lyons et al, Col 3 Line 58) a second metric of a second queue (Lyons et al, Col 14, Lines 55-65) of protocol data units in said second congestible node (Lyons et al, Col 6, Lines 7-19) based on said second plurality of protocol data units; and selectively dropping (Lyons et al, Col 6, Lines 25-30), at said protocol data unit excisor (Lyons et al Col 3, Lines 59-62), a one or more of said second plurality of protocol data units en route to said second congestible node (Lyons et al, Col 6, Lines 7-19) based on said second metric (Lyons et al, Col 14, Lines 55-65). Lyon et al clearly shows the method on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before

reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 10**, Lyon et al clearly discloses a protocol-data-unit excisor (Lyons et al, Col 3 Line 58) comprising: a first input (Lyons et al Col 3, Lines 59-62) for receiving a first plurality of protocol data units, wherein all of the protocol data units received at said first input (Lyons et al Col 3, Lines 59-62) are en route to a first congestible node (Lyons et al, Col 6, Lines 7-19); and a processor for estimating a first metric of a first queue of protocol data units in said first congestible node (Lyons et al, Col 6, Lines 7-19) based on said first plurality of protocol data units, and for selectively dropping (Lyons et al, Col 6, Lines 25-30) one or more of said first plurality of protocol data units en route to said first congestible node (Lyons et al, Col 6, Lines 7-19) based on said first metric (Lyons et al, Col 14, Lines 55-65). Lyon et al clearly shows the method on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

Consider **Claim 11**, Lyon et al clearly discloses the method of claim 10 wherein protocol data unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18) decides whether to drop a protocol data unit

(Lyons et al, Col 6, Lines 25-30) based on Random Early Detection (Lyons et al, Col 1, Line 10, Col 6, Lines 50-60). Lyon et al clearly shows on the use of Random Early Detection in its switch for controlling congestion of packets passing through the network.

Consider **Claim 12**, Lyon et al clearly discloses the protocol-data-unit excisor (Lyons et al, Col 3 Line 58, Col 4 Lines 1-46, Col 6 Lines 40-43, Col 8, Lines 65-67, Col 9, Lines 1-18) of claim 10 further comprising: a second input (Lyons et al Col 3, Lines 59-62) for receiving a second plurality of protocol data units, wherein all of the protocol data units received at said second input (Lyons et al Col 3, Lines 59-62) are en route to a second congestible node (Lyons et al, Col 6, Lines 7-19); and a processor for estimating a second metric of a second queue (Lyons et al, Col 14, Lines 55-65) of protocol data units in said second congestible node (Lyons et al, Col 6, Lines 7-19) based on said second plurality of protocol data units, and for selectively dropping (Lyons et al, Col 6, Lines 25-30) one or more of said second plurality of protocol data units en route to said second congestible node (Lyons et al, Col 6, Lines 7-19) based on said second metric (Lyons et al, Col 14, Lines 55-65). Lyon et al clearly shows the method on how packets are transmitted over the network from multiple number of sources while on route to the respective node(s), during the transmission the packets go through the switch (protocol data unit excisor) before reaching the node(s), and within the switch, it calculates based on metrics on whether to drop packets or allow packets to avoid traffic congestion at the node(s).

(10) Response to Argument

Appellant's arguments: pages 18-20 of the Appeal Brief

1) The cited art does not teach or suggest, receiving a first plurality of protocol data units at a first input of a protocol-data-unit excisor, wherein all of the protocol data units received at said first input are en route to a first congestible node.

2) Receiving at said protocol-data-unit excisor a metric of a queue in said first congestible node.

Examiner's response:

From hereafter Lyon et al will be referred to as Lyon.

Lyon disclosed "first plurality of protocol data units at a first input of a protocol-data-unit excisor, wherein all of the protocol data units received at said first input are en route to first congestible node". Lyon disclosed in (Col 3, Lines 59-62), that the switch-fabric has a queue for receiving packets which are transmitted over the network from a plurality of sources, and disclosed that the packets do leave the switch to go their respective destinations (nodes etc). Further support can be seen in (Col 4 Lines 1-9),

as the use of the apparatus is to involve the use of a switch and control the congestion across the link in the network. Lyon disclosed in (Fig 6, Col 6, Lines 7-18) that nodes are connected to the network, and communication between the nodes and switch can be bi-directional or uni-directional, and that the switch can be protocol-excisor unit as it contains the queue, and sends the traffic to the nodes. And the switch need not perform network switching as it can be of any device/apparatus which is capable of detecting congestion and having a transmission queue and transmitting data units to a single connection, or a group of connections or all connections to/from it (Fig 2, Col 6 Lines 7-20). In Lyon, the switch/apparatus disclosed can be considered the protocol-excisor unit and anyone of the system nodes A, B, A' and B' can be considered a congestible node as they are connected to the protocol-excisor unit/switch (Fig 2, Col 6, Lines 7-19).

Lyon disclosed "receiving said protocol-data unit excisor a metric of a queue in said congestible node". Lyon disclosed that the switch/apparatus has a marking decision generator which waits for new packets to arrive, and when a packet arrives it updates the connection metrics, as there is at least one metric per connection. And the unit also updates the connection statistics. Lyon disclosed that the unit does take into account of network metrics (Col 14, Lines 54-67).

And the switch/apparatus does indeed mark packets based on priority classes and metrics. Further example on how metrics affect the data can be seen in (Col 17, Lines

50-61). Lyon disclosed that if one client is paying more for better service than those network connections will carry more weight and the unit can drop lower weight connections based on metrics to favor the prioritized data connection. Lyon does disclose that the unit can perform intelligent decisions based on metrics.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Anish Sikri/

Examiner, Art Unit 2143

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